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Subject II

Policies for Sustainable Use of Water

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The key issues identified for discussion on the theme: "Policies for Sustainable Use of Water" include inter alia: 1. Water scarcity and accessibility, 2. Water quality and Environment, 3. Local governance and Decentralisation, 4. Integrated Basin Management, 5. Capacity Building, 6. Technology Transfer and 7. Legislation.

The discussion on these issues is synthesised and summarised keeping in focus the farmers, Government and ecology.

1. System management and water control: Presently the main system management is given priority in terms of investment. Inequities in water supply is more predominant in tail end region of each distributory resulting in conflicts and inefficiency in water use. Improved crop and water management technologies has not been properly adopted by the farmers due to unequal water supplies. Cost recovery is also affected due to unreliable supplies. Farmers' participation and cost sharing are also not forthcoming. System management should ensure integrated approach, and co-ordination among different institutions involved.
2. Water use efficiency: Current efficiency is around 20-40 per cent indicating the scope for improving it further. Integration of strategies like water saving methods, recycling the domestic wastewater and alternative crop pattern need to be analysed. The return flows should be given due consideration while calculating the efficiency. Consumptive use of crops be given due weightage in planning water release. Finally, water balance at sub-basin level needs to be worked out.
3. Cost recovery: Annualised total cost of operating the system is important for cost recovery. Farmers' organisation be authorised to collect the water charges and incentive structures for better management be operationalised. In the case of multipurpose projects, the cost recovery should represent the irrigation component alone. This will have more implications on subsidy calculation. In the case of domestic sector, full cost recovery be ensured so that conservation will be possible.

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4. Watershed and rainwater harvesting: Upstream and downstream conflicts in sharing the water, need to be addressed. Appropriate structures/ strategies (i.e., in-situ conservation or storage) should be developed depending upon the location. Community and private initiative in the process need to be strengthened. Post-project management is equally important to sustain the investment. Community control of the resources as well as new extraction is vital. Existing water bodies like village ponds, tanks be fully utilised for this purpose.
5. Virtual water: Much debate is on who benefits from virtual water transfer, to what extent and at what level. This concept could be examined thoroughly for policy purposes. It is relevant in the context of inter-generational equity especially in the over-exploited regions. Both regulation and pricing may give some signals in addressing this issue.
6. Interlinking of rivers: There are several dimensions, viz., hydrological, technological, ecological, socio-economic, financial and political. In the Indian context this will pose more questions than solutions. In-depth studies both at micro and macro levels are necessary.
7. Privatisation of water resources: Discussions were initiated at different levels of private roles, viz., in the acquisition and distribution of water. In the irrigation sector, private participation may play a role as service provider only. In the case of domestic supplies, private sector can involve itself both in supply as well as distribution including conservation aspects. Private firms can also be encouraged to participate in desalinisation process to provide domestic supplies at reasonable prices. Appropriate regulatory mechanisms should be evolved.
8. Legislation: Existing legislation/Acts are not properly enforced. Legal framework should be supported by technology back up for effective enforcement. Cost of regulation vs. cost of educating needs to be examined. Ground water regulation/Acts in terms of issuing permits, distance, depth etc., should be amended and enforced.

CONCLUSIONS

1. There is a need for future investment in secondary and tertiary distribution system to improve the efficiency in water use. Involvement of stakeholders at different levels, viz., distributory to main system (apex) level should be assured for proper control and distribution of the supplies. Basin approach will ensure effective governance.
2. In order to improve water use efficiency, both gravity and micro-irrigation techniques be promoted on a large scale. The subsidies component for drip and sprinklers should be re-examined so that the component cost can be reduced. Tax-relief may be given for sole manufactures of the system

- components. Training and technology back-up both for the farmers and extension officials should be provided effectively to ensure capacity building.
3. In the water scarcity regions, appropriate crop pattern taking in to account the length of growing period, PET, rainfall, soil and profitability of crops be attempted through water users associations and local community. Input supply market support be ensured. Contract farming/private industries should be encouraged to initiate alternate crop patterns particularly for pulses and oil seeds whose water requirements are comparatively low.
 4. Recovery of full cost both in the irrigation and domestic sectors is important. Privatisation of domestic water supplies, wastewater recycling and desalination should be given priority to manage the future demand.
 5. Rainwater harvesting is vital both at community and individual level. Design of the appropriate structures and post-project management should be given priority. Water balance studies covering upstream and down stream supplies should be conducted to study the effectiveness of rain water harvesting.
 6. Legislation for controlling over-exploitation as well as protecting the water quality be strictly enforced and monitored, especially, awareness programmes on these aspects should be initiated at the community level.